

# KIC 002579814

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
002579814-01	OBS	No	2.788619	132.131308	16.1	28.788	8.1	8.0	1.49	6072	0.60	1679.85

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002579814-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

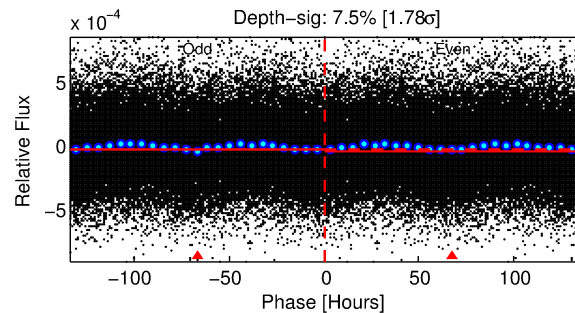
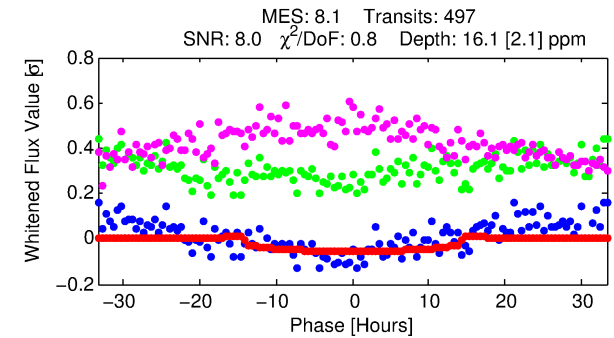
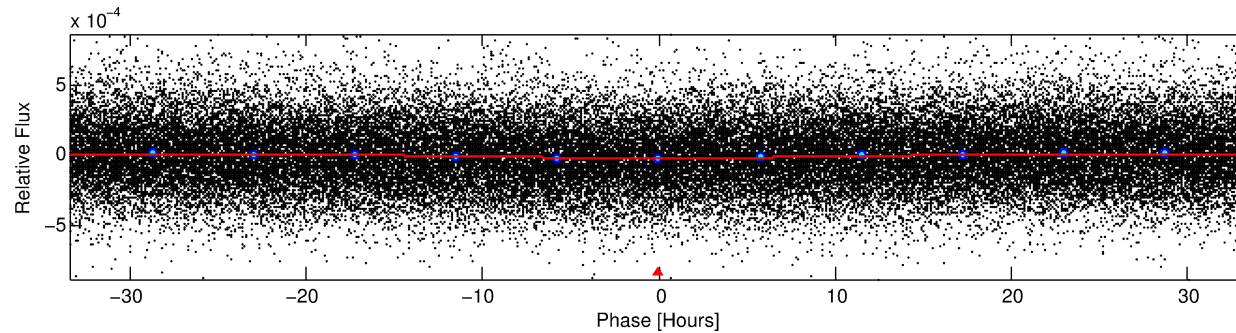
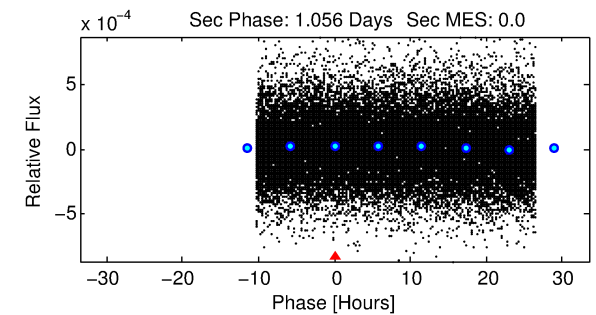
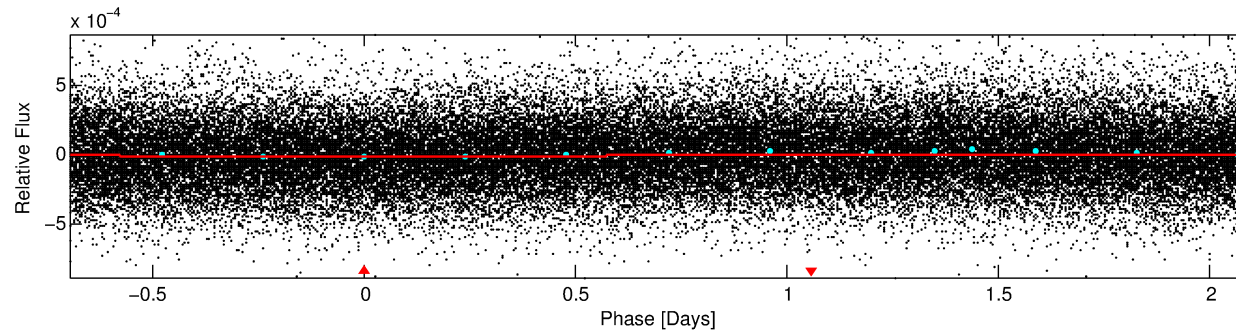
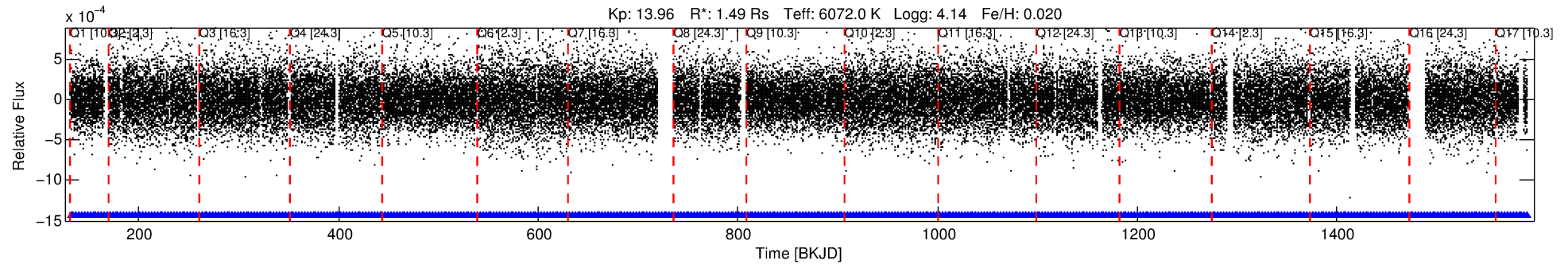
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 002579814-01

No Significant Match Found

# DV One-Page Summary

KIC: 2579814 Candidate: 1 of 1 Period: 2.789 d



## DV Fit Results:

Period = 2.78862 [0.00012] d  
Epoch = 132.1313 [0.0276] BKJD  
Rp/R\* = 0.0037 [0.0036]  
a/R\* = 1.03 [0.26]  
b = 0.01 [605.25]  
Seff = 1679.85 [762.34]  
Teff = 1632 [185] K  
Rp = 0.60 [0.61] Re  
a = 0.0402 [0.0110] AU  
Ag = N/A  
Teffp = N/A

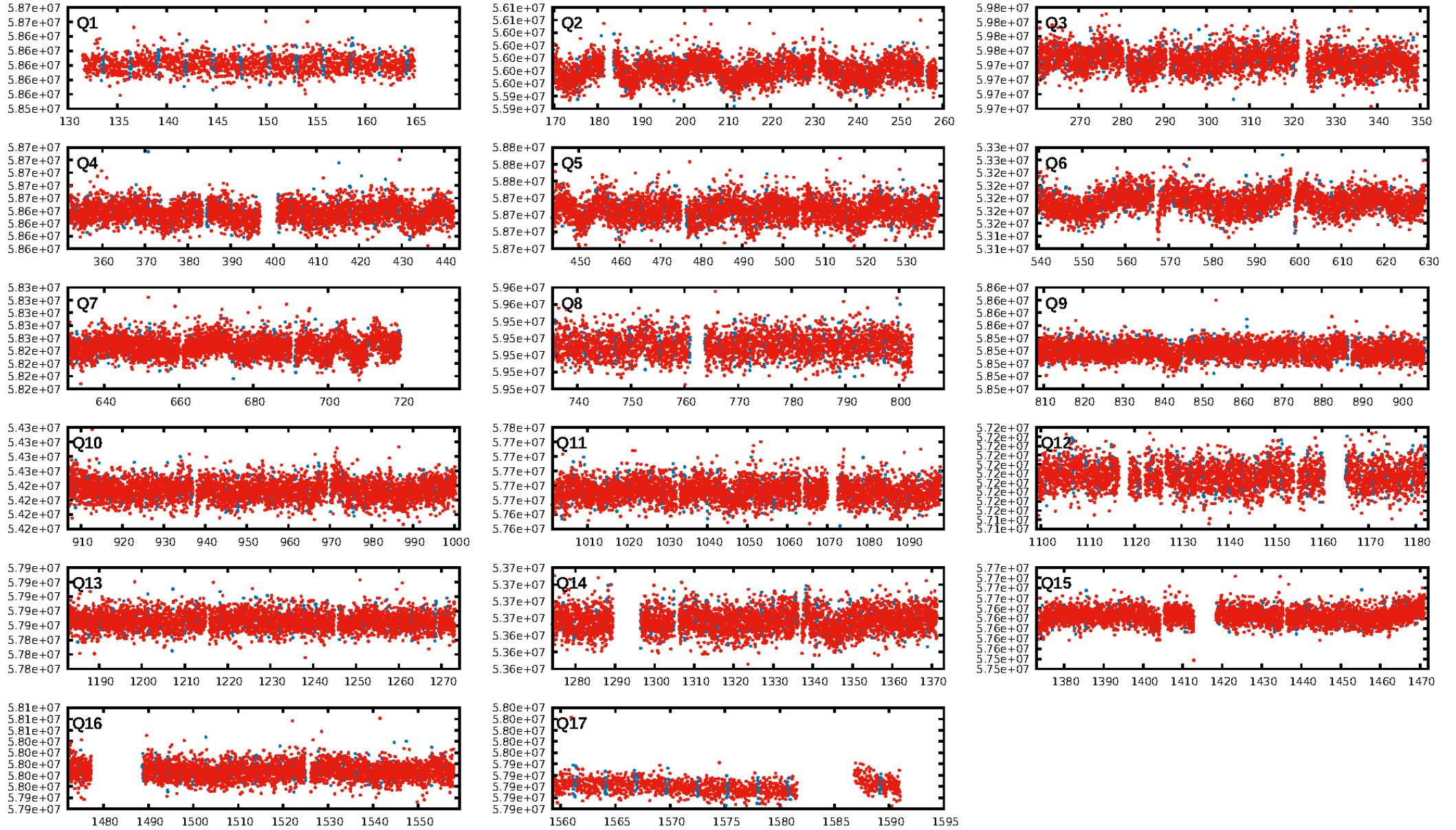
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [475/475]  
GhostDiagnostic-chr: 0.6329  
Centroid-sig: 0.0%  
Centroid-so: 12.896 arcsec [8.13σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [17/17]

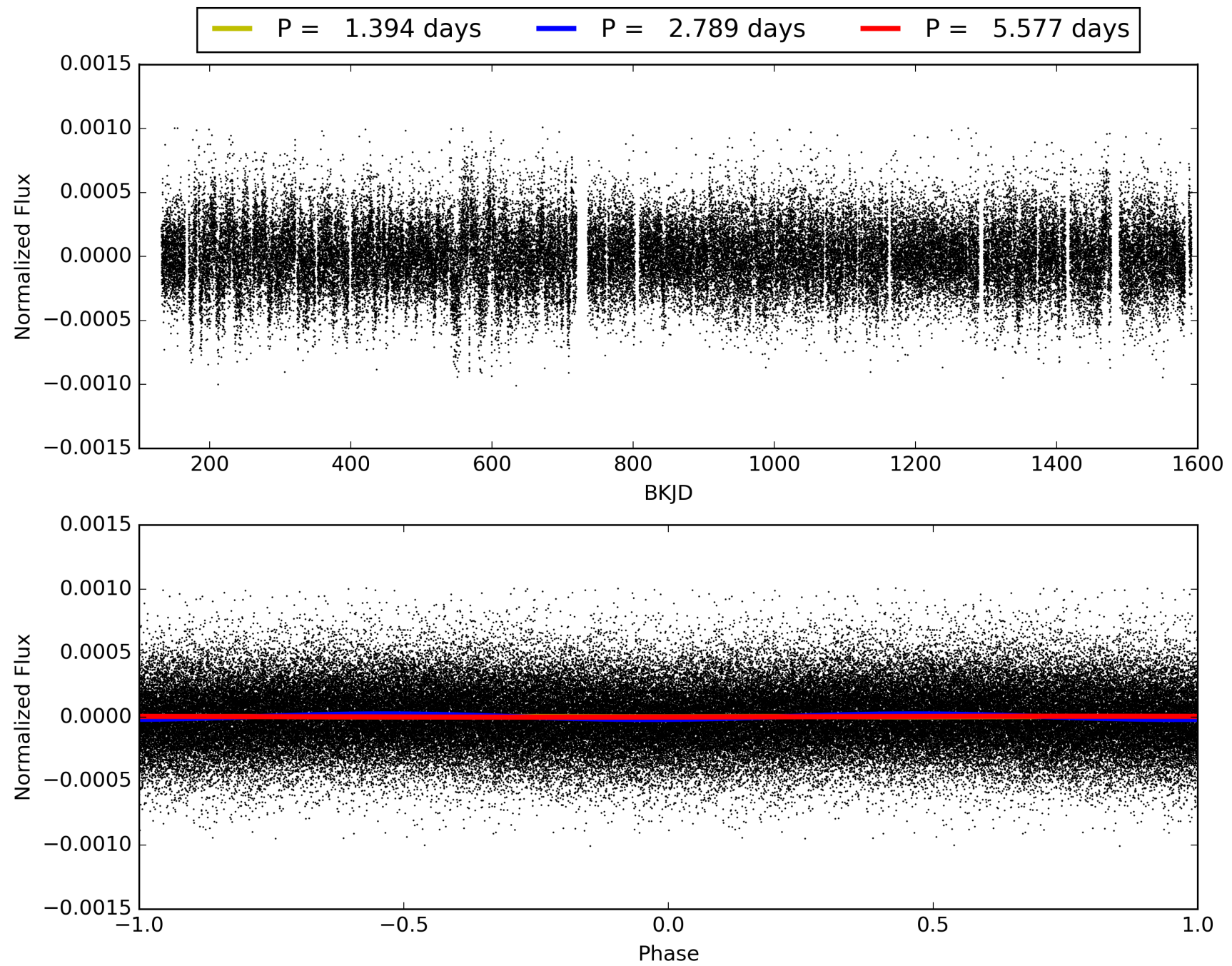
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:54:02 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 002579814-01, PDC Light Curves

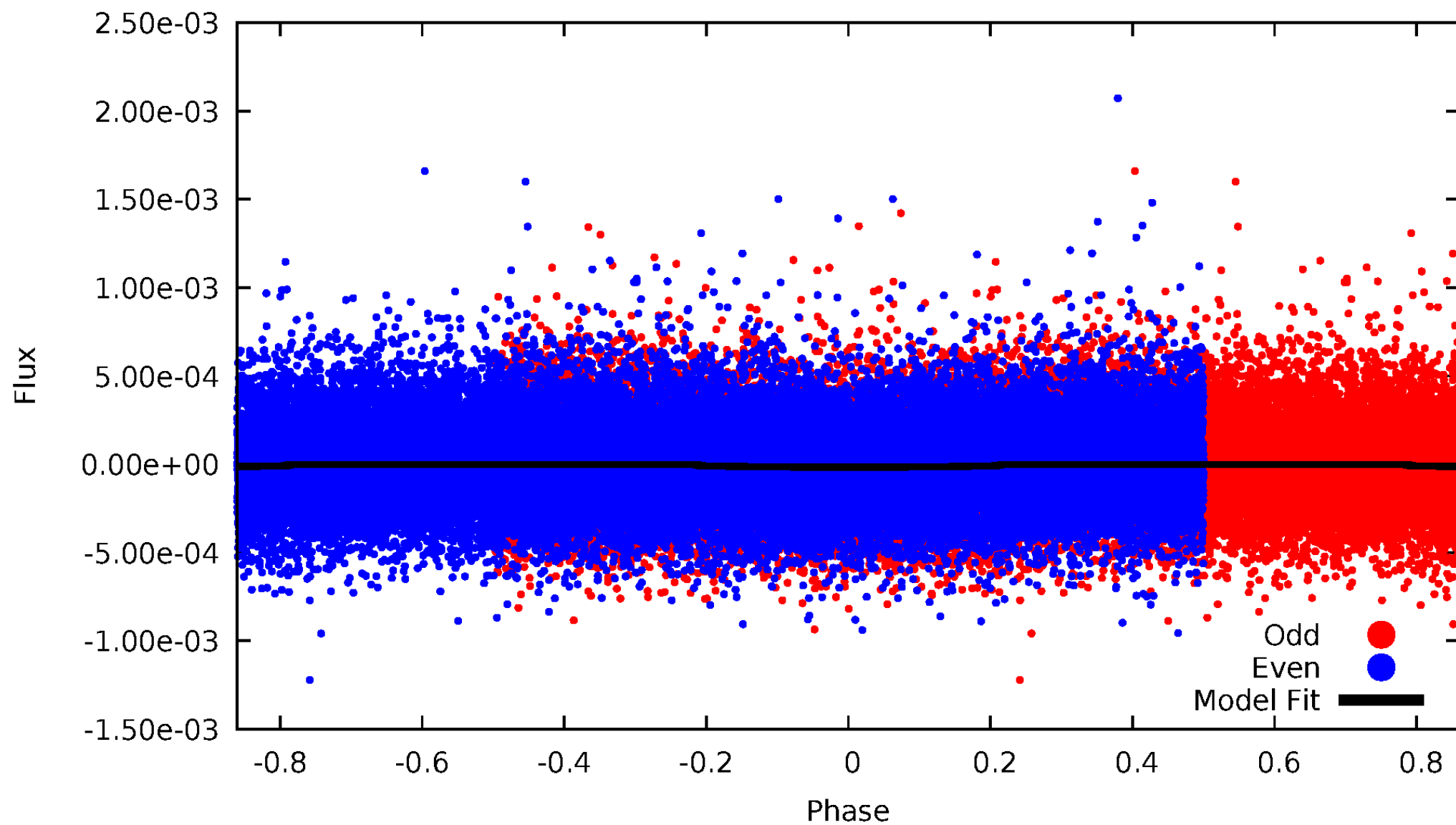


TCE 002579814-01



# DV Odd/Even

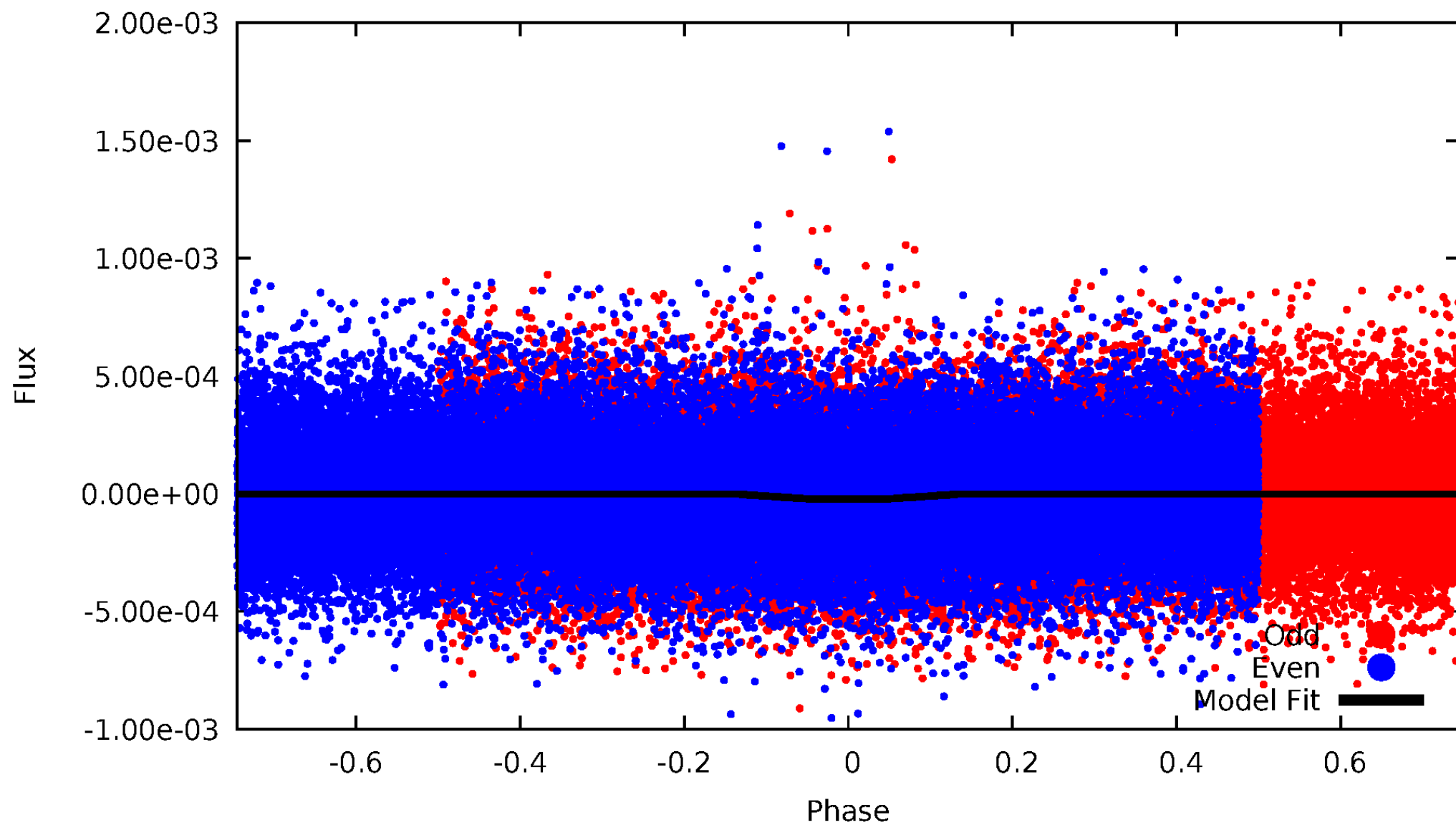
TCE 002579814-01





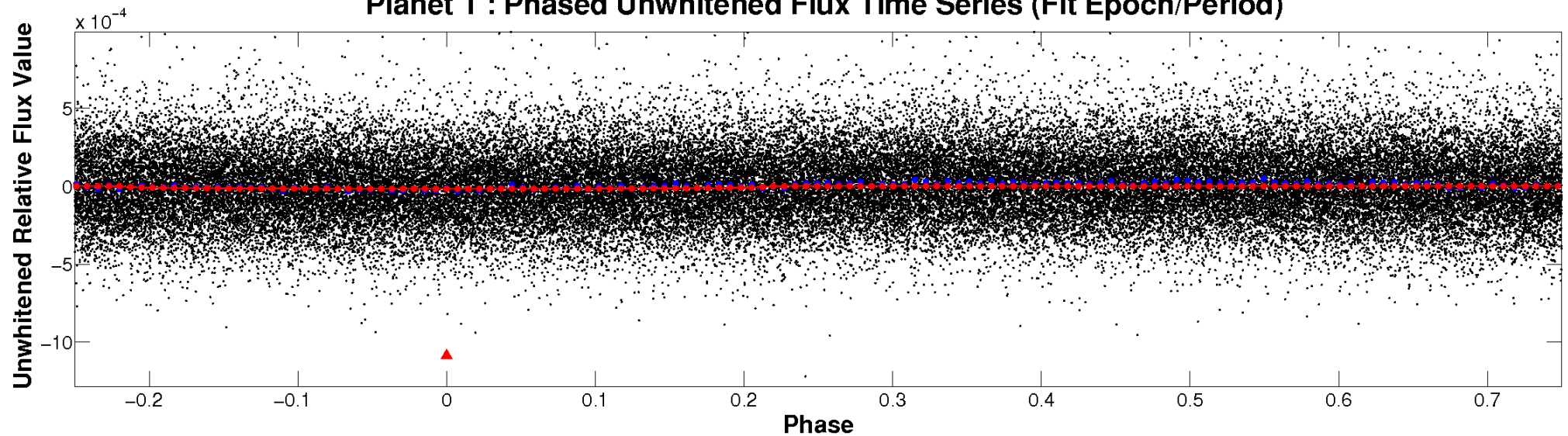
# ALT Odd/Even

TCE 002579814-01

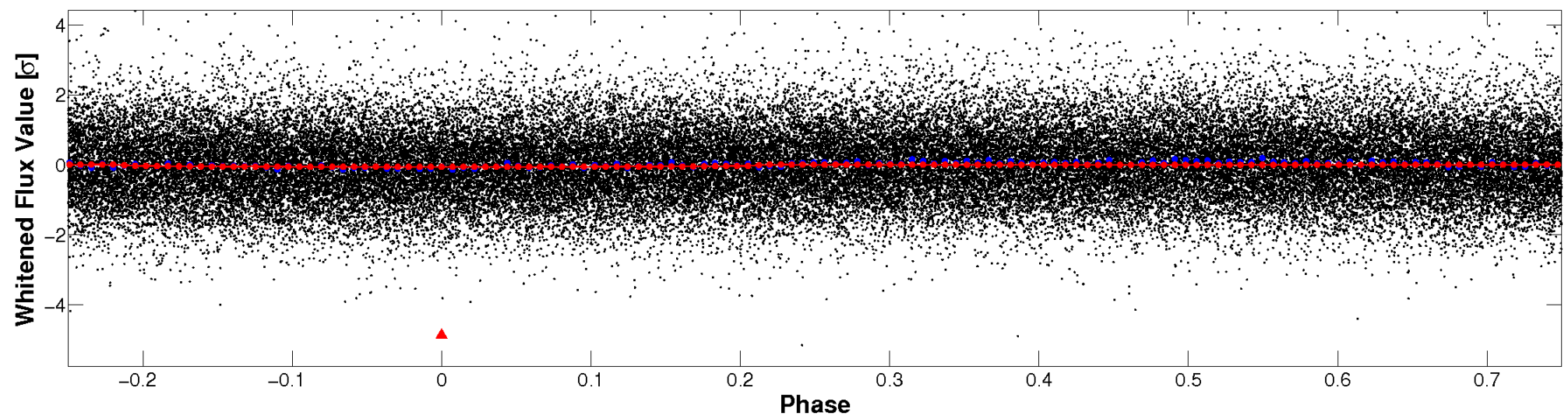


# Non-Whitened Vs. Whitened Light Curve

**Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)**

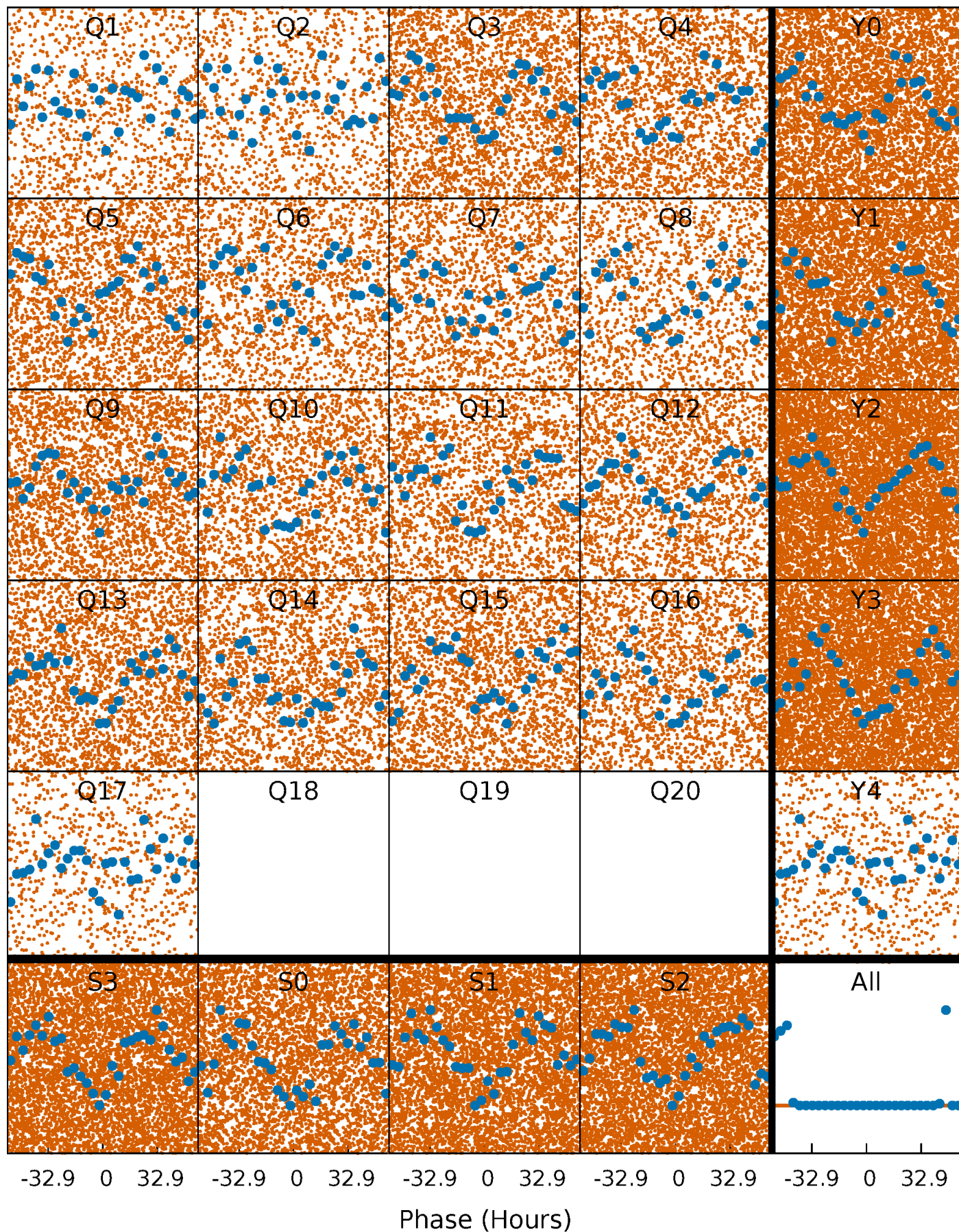


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

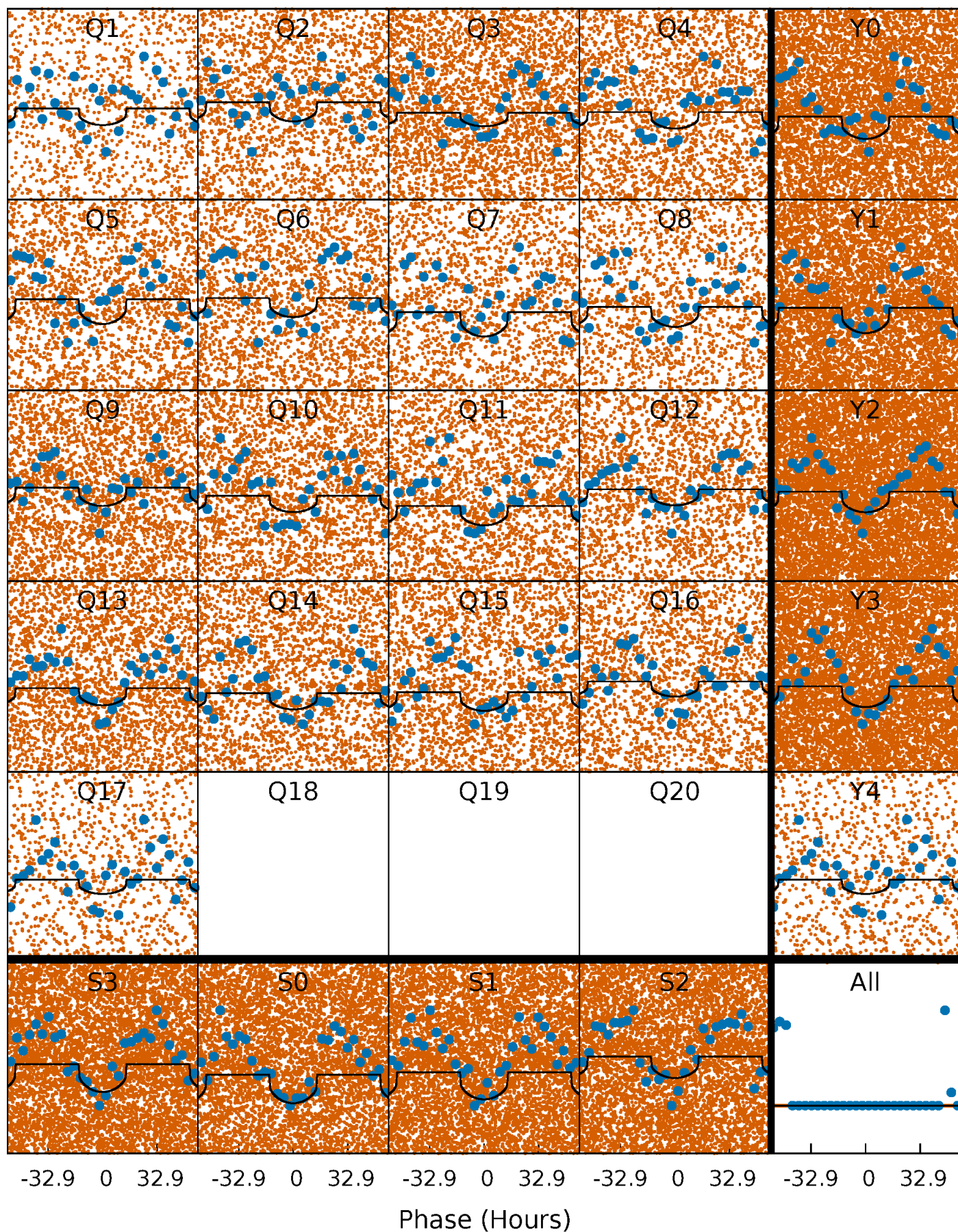
TCE 002579814-01 P= 2.788619 Days  $T_0=132.131308$  (BKJD)





# DV Quarter-Phased Transit Curves

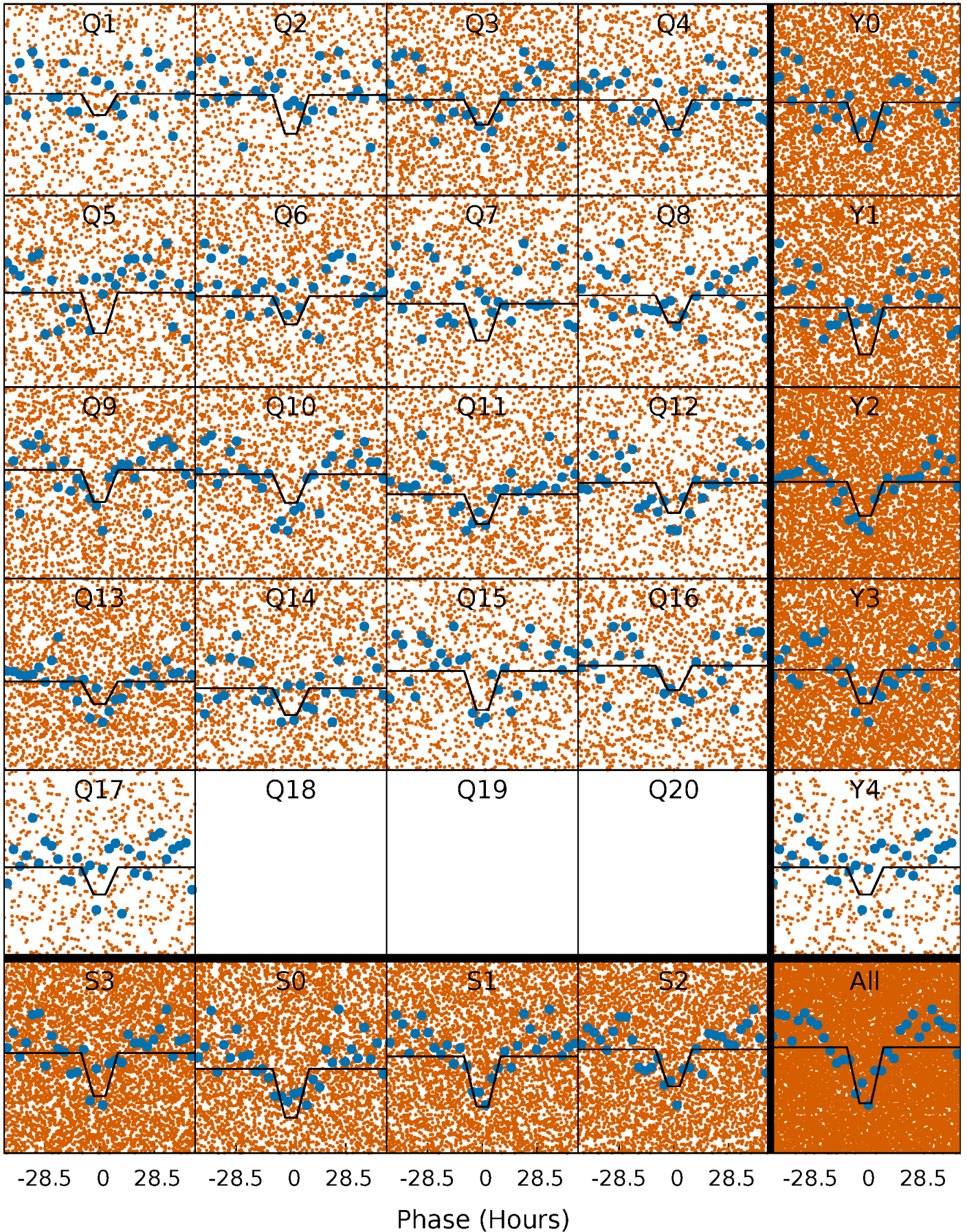
TCE 002579814-01 P= 2.788619 Days  $T_0=132.131308$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

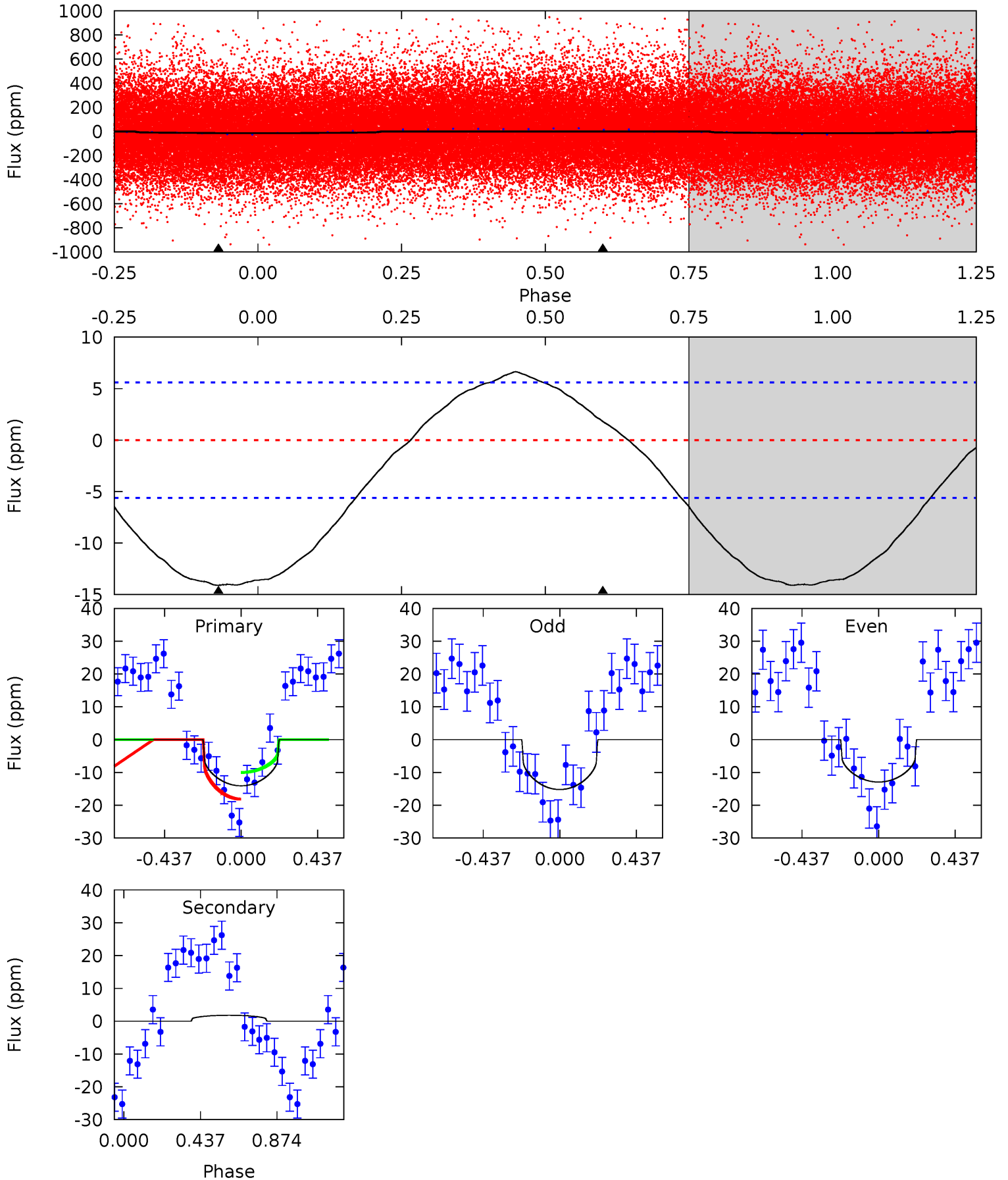
TCE 002579814-01 P= 2.788289 Days  $T_0=132.177269$  (BKJD)



# DV Model-Shift Uniqueness Test

002579814-01, P = 2.788619 Days, E = 129.342689 Days

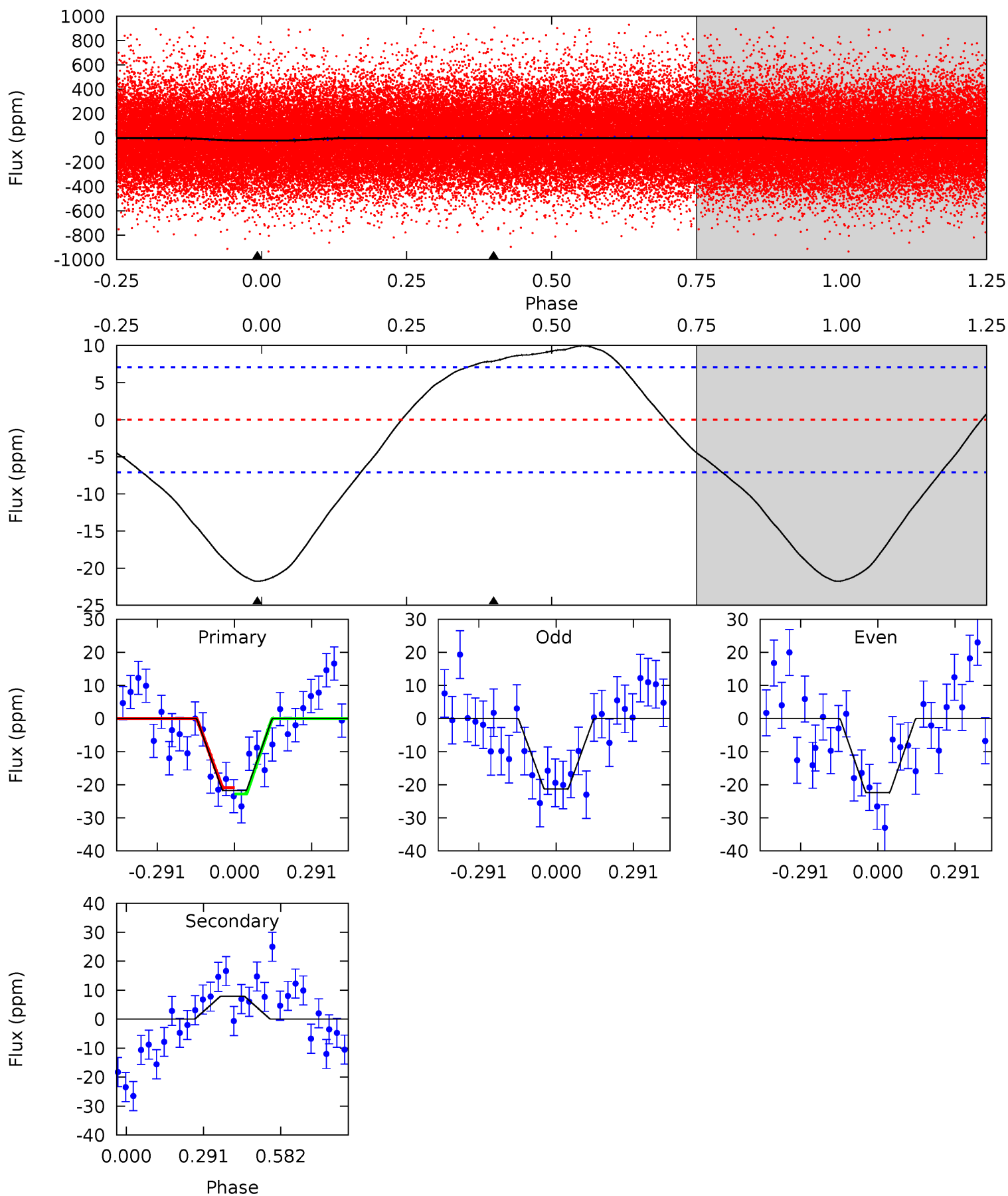
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	-1.37	0	0	4.25	0.78	1.20	10.7	10.7	-1.37	-1.37	0.86	0.85	0.32	3.06



# Alt Model-Shift Uniqueness Test

002579814-01, P = 2.788289 Days, E = 129.388980 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	-4.84	0	0	4.34	1.06	1.60	13.3	13.3	-4.84	-4.84	0.32	1.43	0.31	0.59





### Stellar Parameters For KIC 002579814

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6072^{+190}_{-211}$	$4.137^{+0.252}_{-0.168}$	$0.020^{+0.250}_{-0.300}$	$1.494^{+0.431}_{-0.431}$	$1.115^{+0.176}_{-0.159}$	$0.471^{+0.726}_{-0.217}$
	+3%/-3%	+6%/-4%	+1250%/-1500%	+29%/-29%	+16%/-14%	+154%/-46%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 002579814-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$2\pm 1$	$0.65^{+0.62}_{-0.40}$	$2267^{+177}_{-199}$	$-3821^{+796}_{-1688}$	$-3.349^{+2.845}_{-19.311}$
Alt.	$8\pm 2$	$0.82^{+0.63}_{-0.46}$	$2265^{+197}_{-188}$	$-4657^{+796}_{-2173}$	$-10.623^{+7.360}_{-41.282}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature  
 $T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )  
 $A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

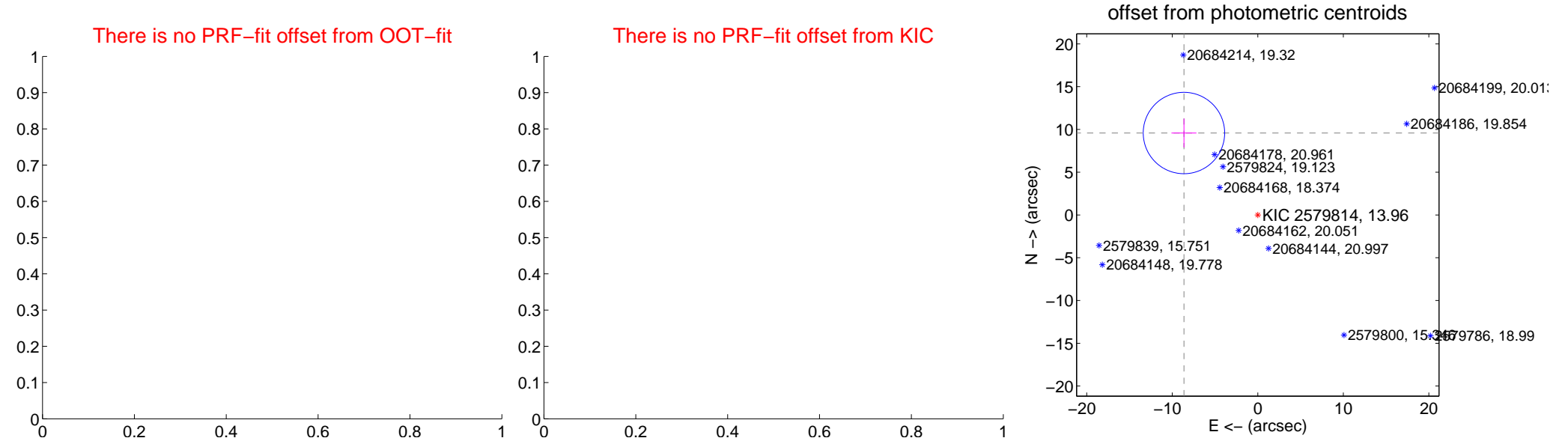
## DV Centroid Data

Supplemental centroid analysis for 002579814-01. Kepler magnitude: 13.96. Transit SNR 8.01

There are 0 quarters with good PRF difference image offsets

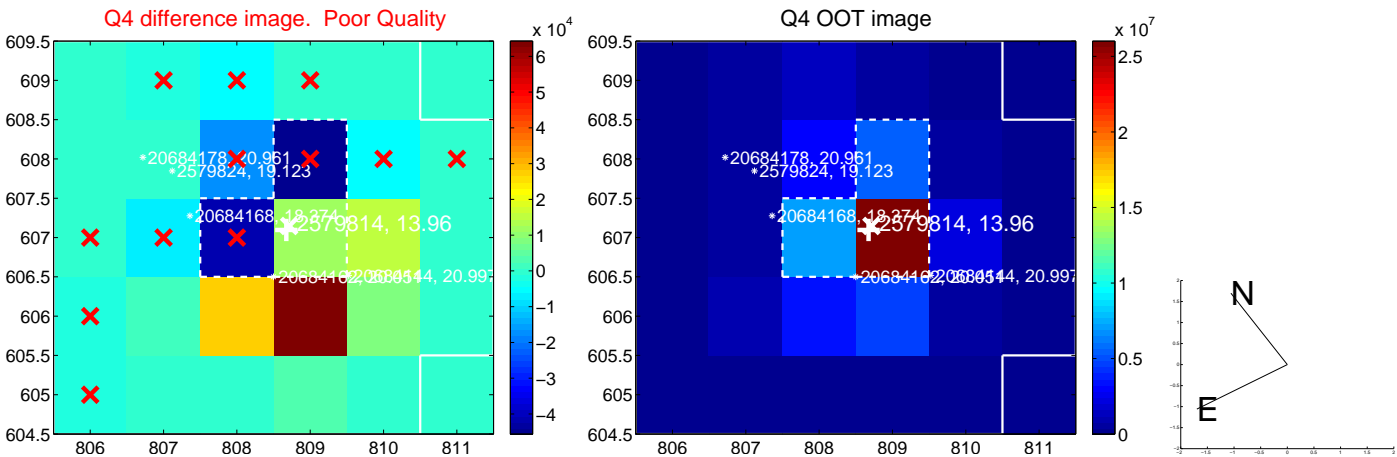
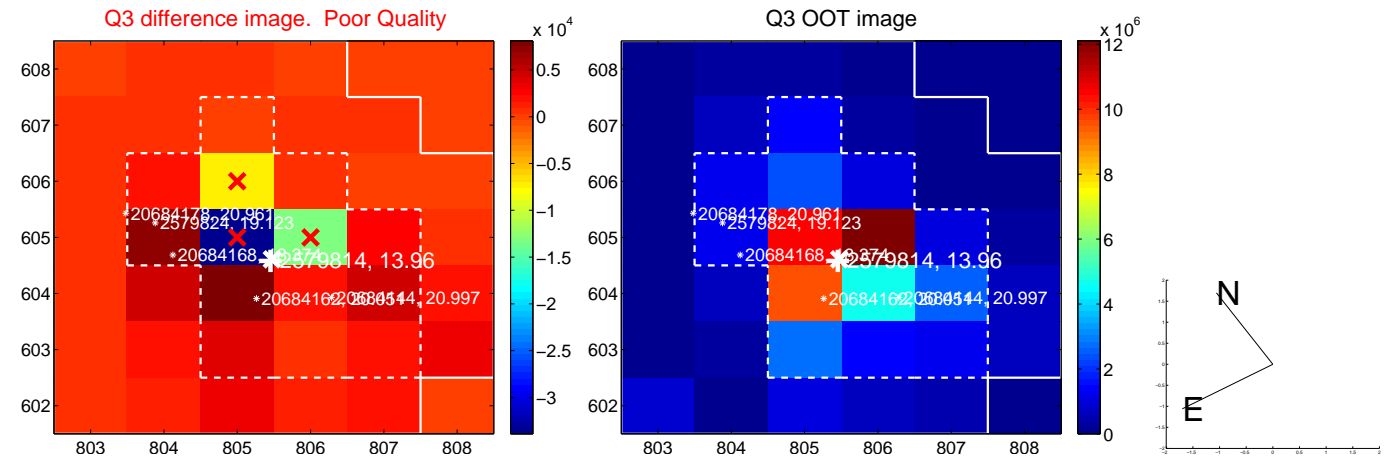
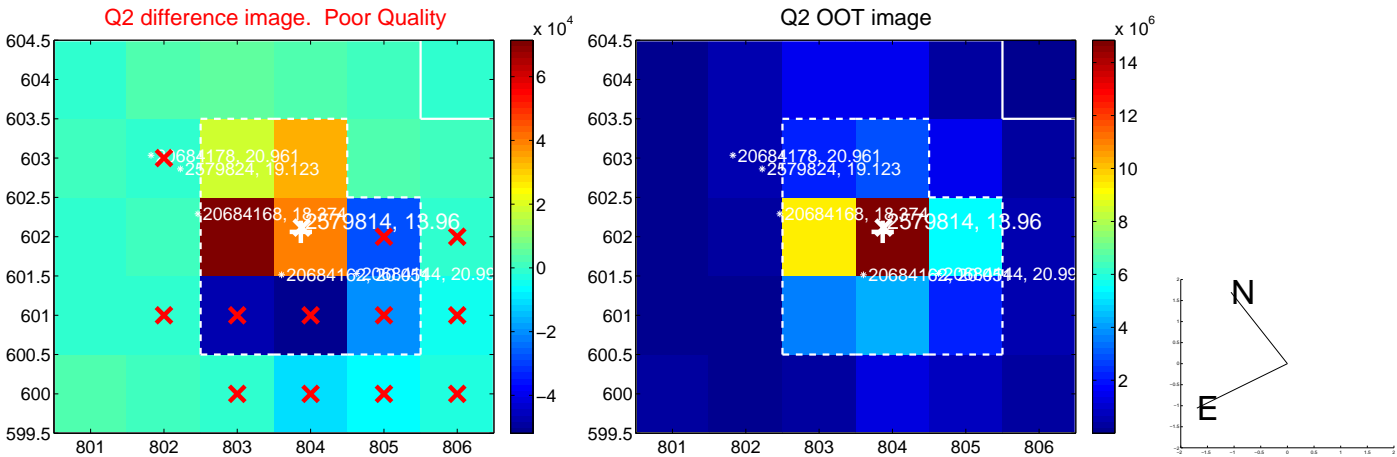
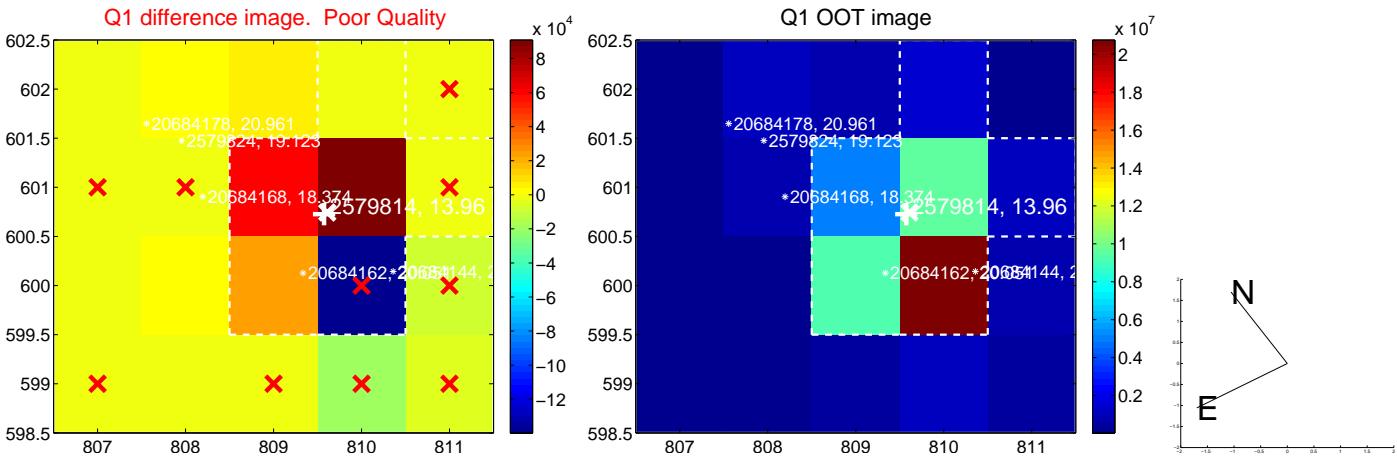
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$12.90 \pm 1.59$	8.13	$8.63 \pm 1.45$	$9.58 \pm 1.69$

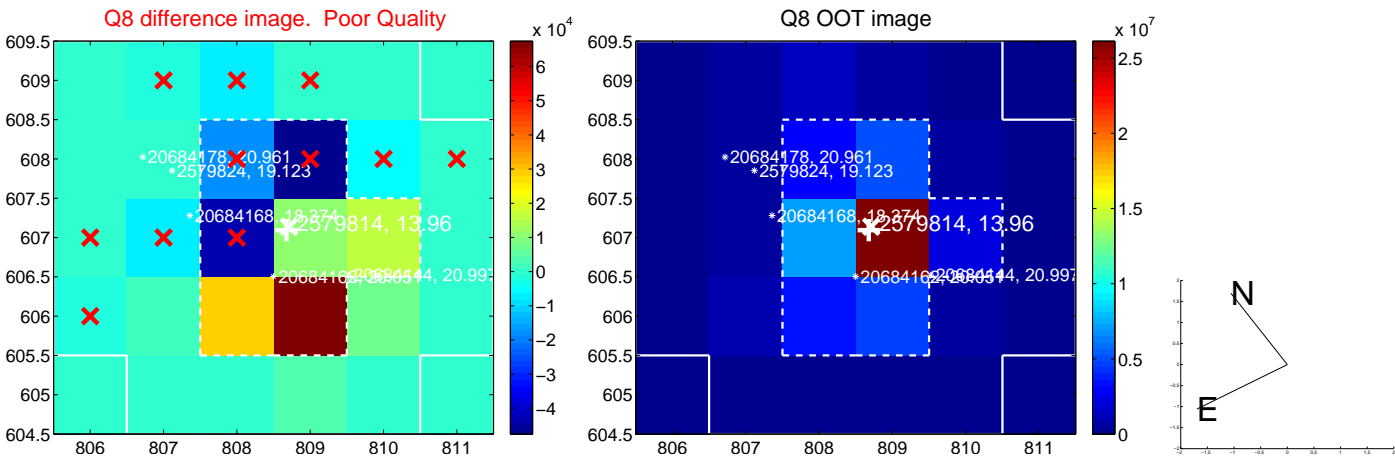
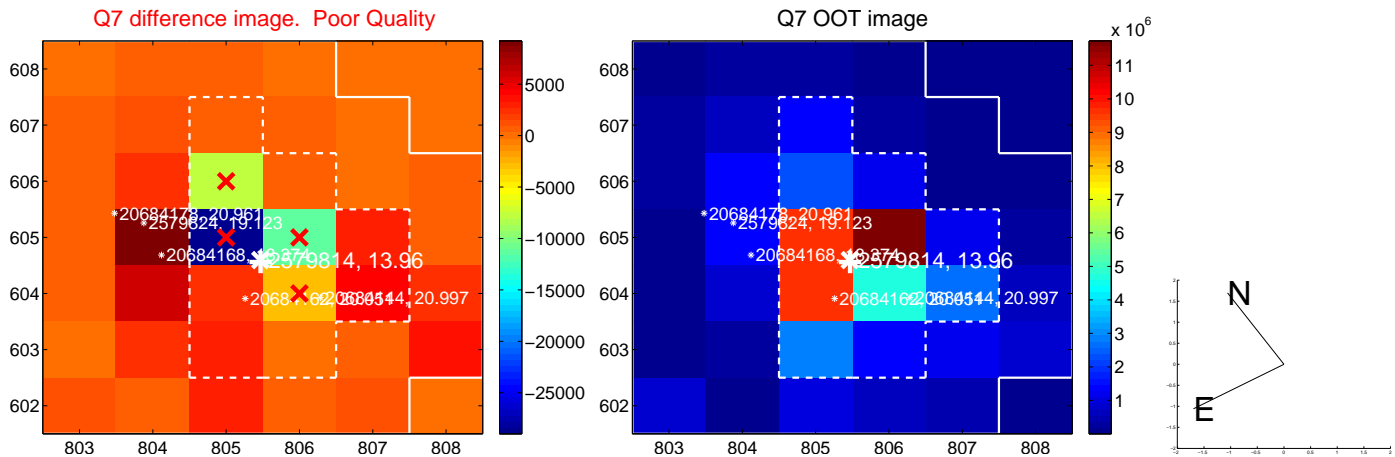
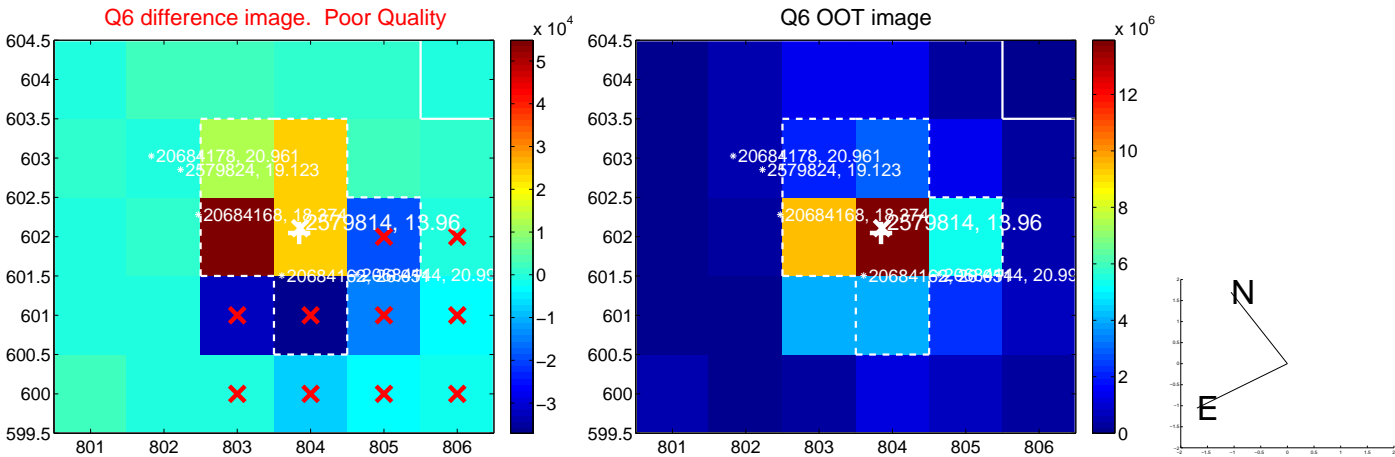
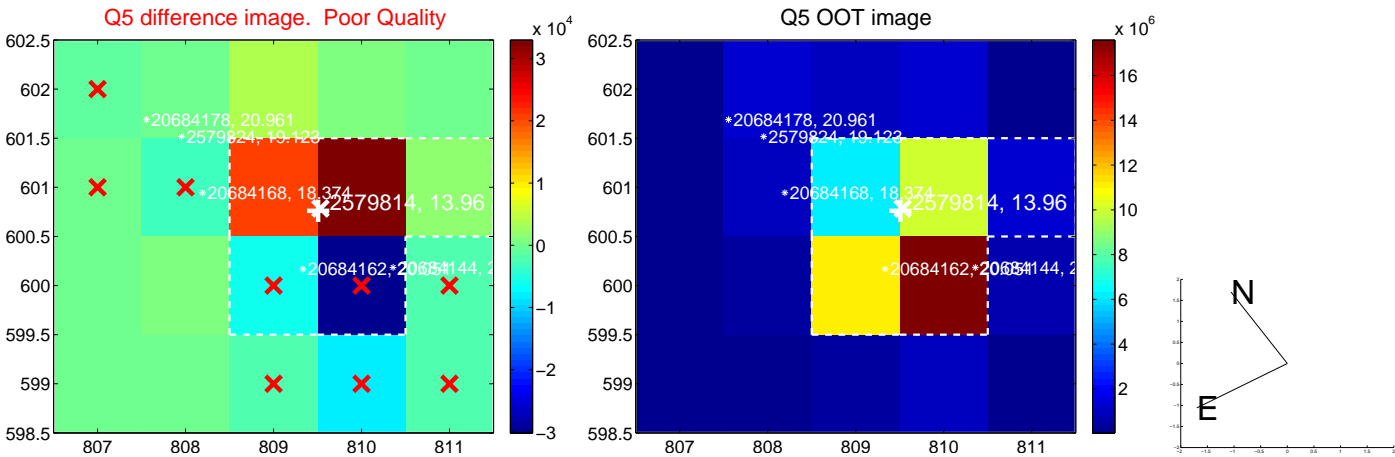


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

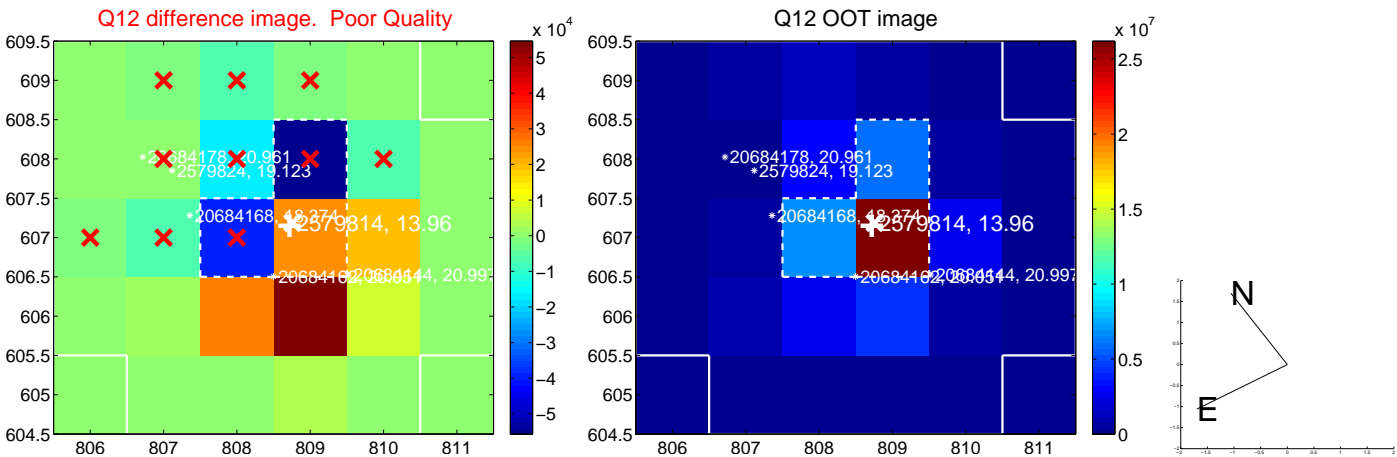
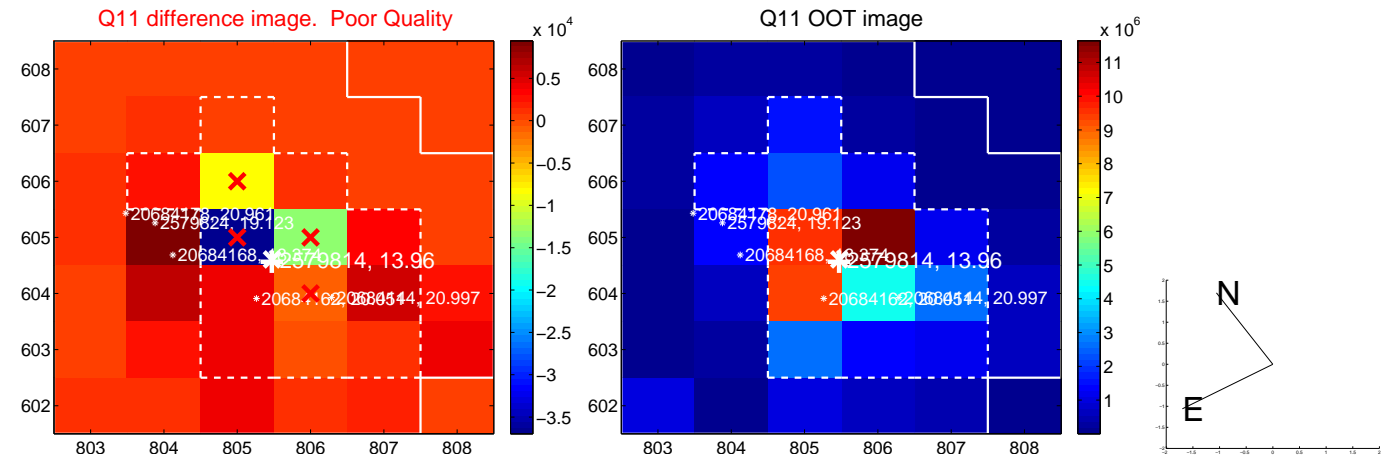
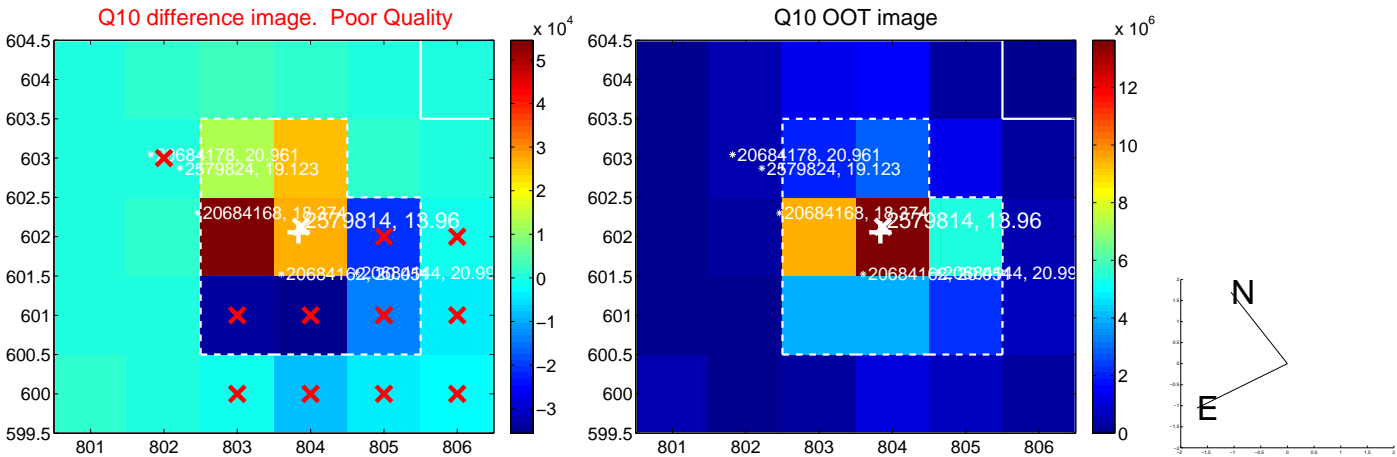
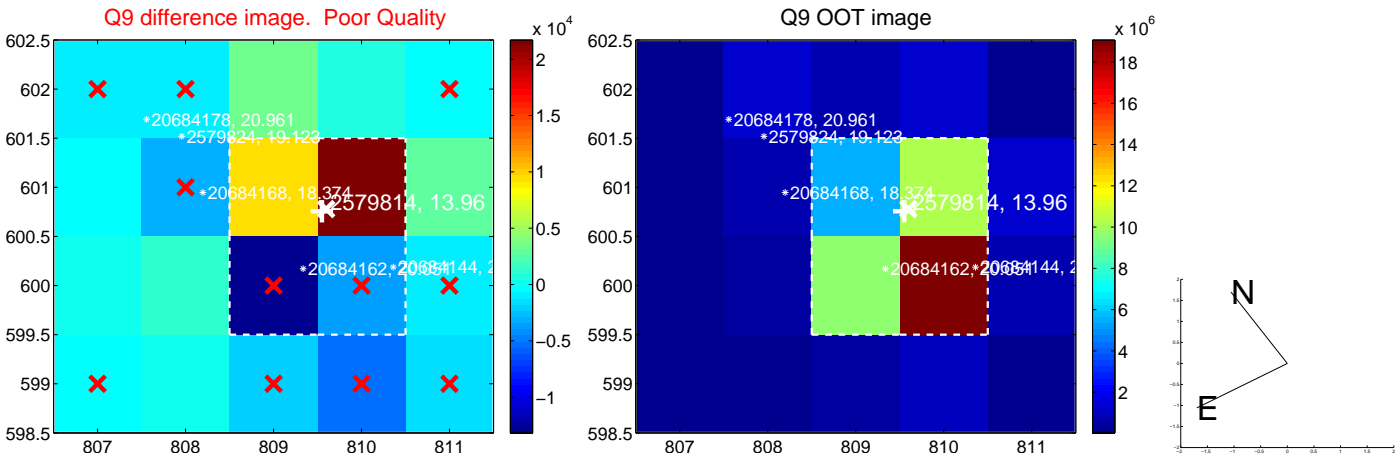


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

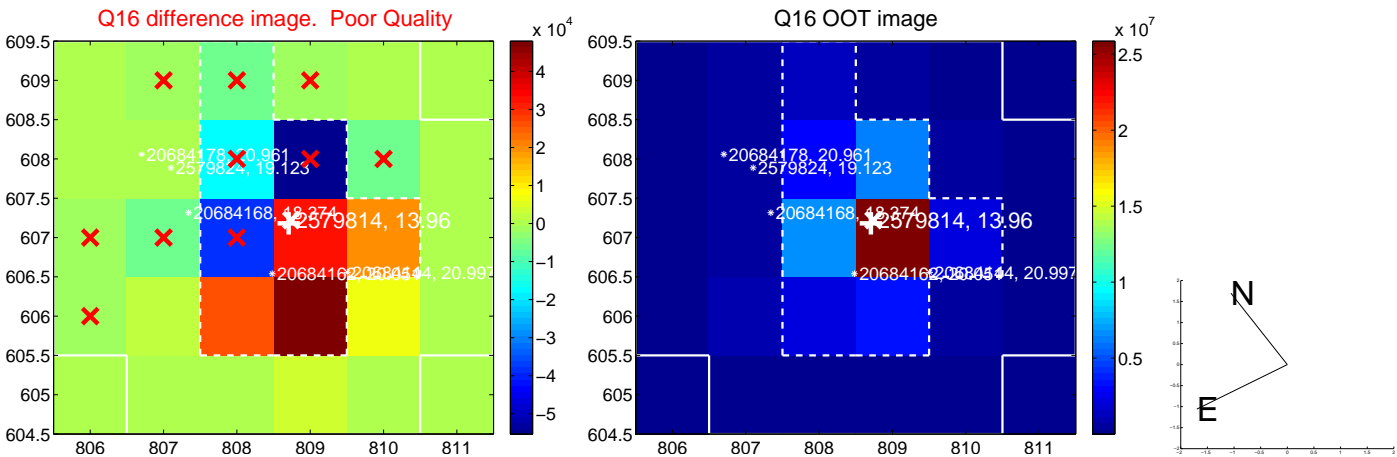
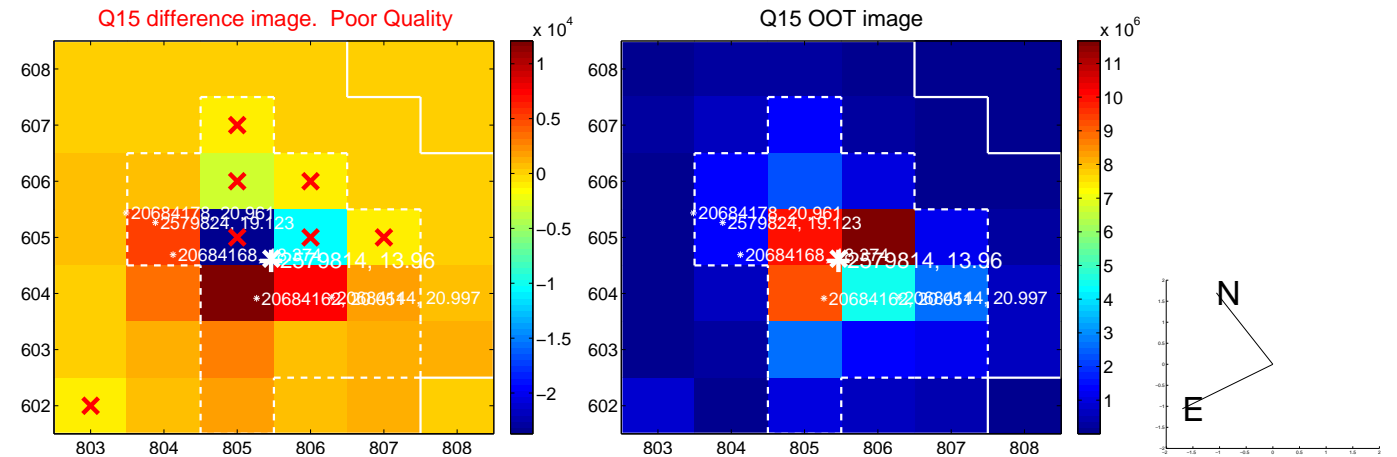
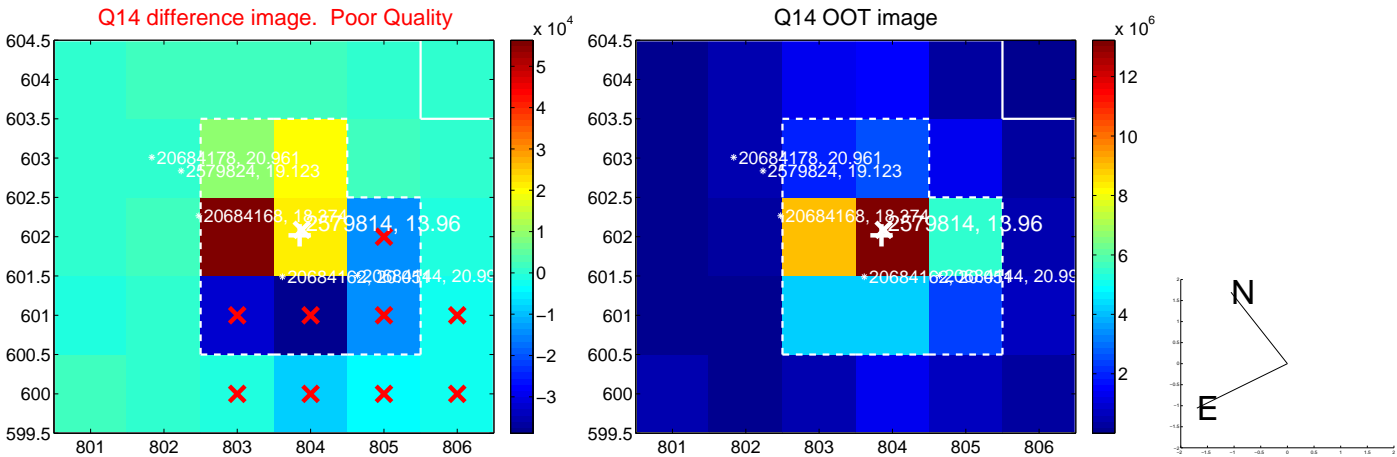
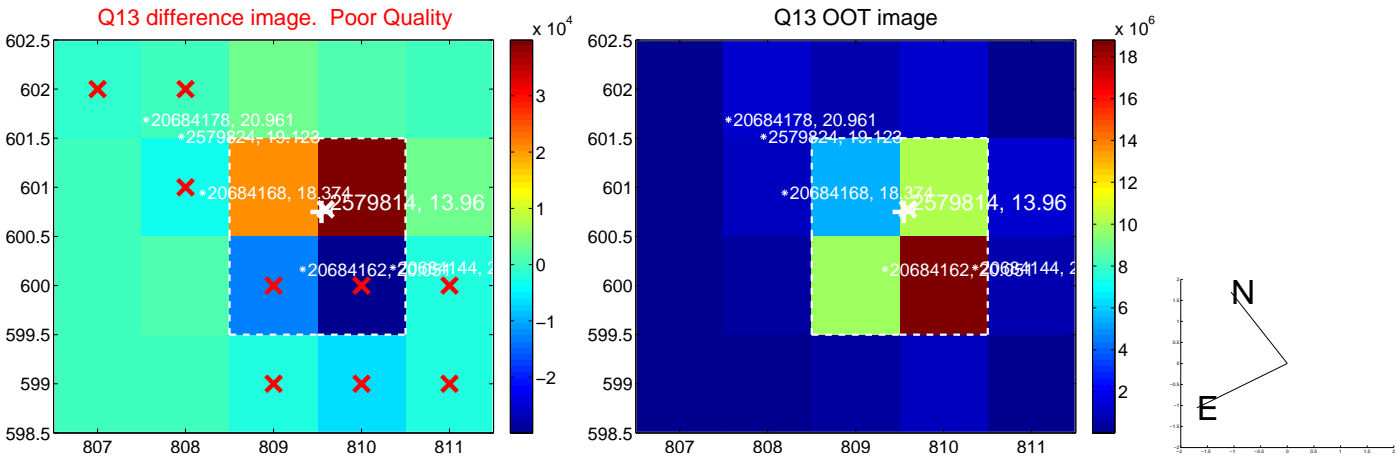




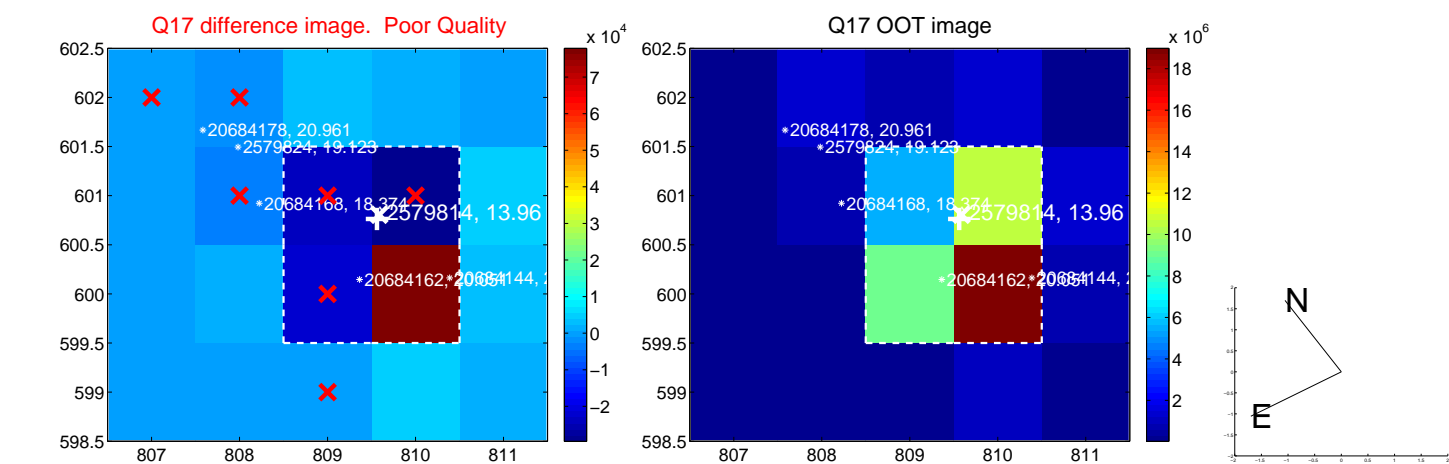
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



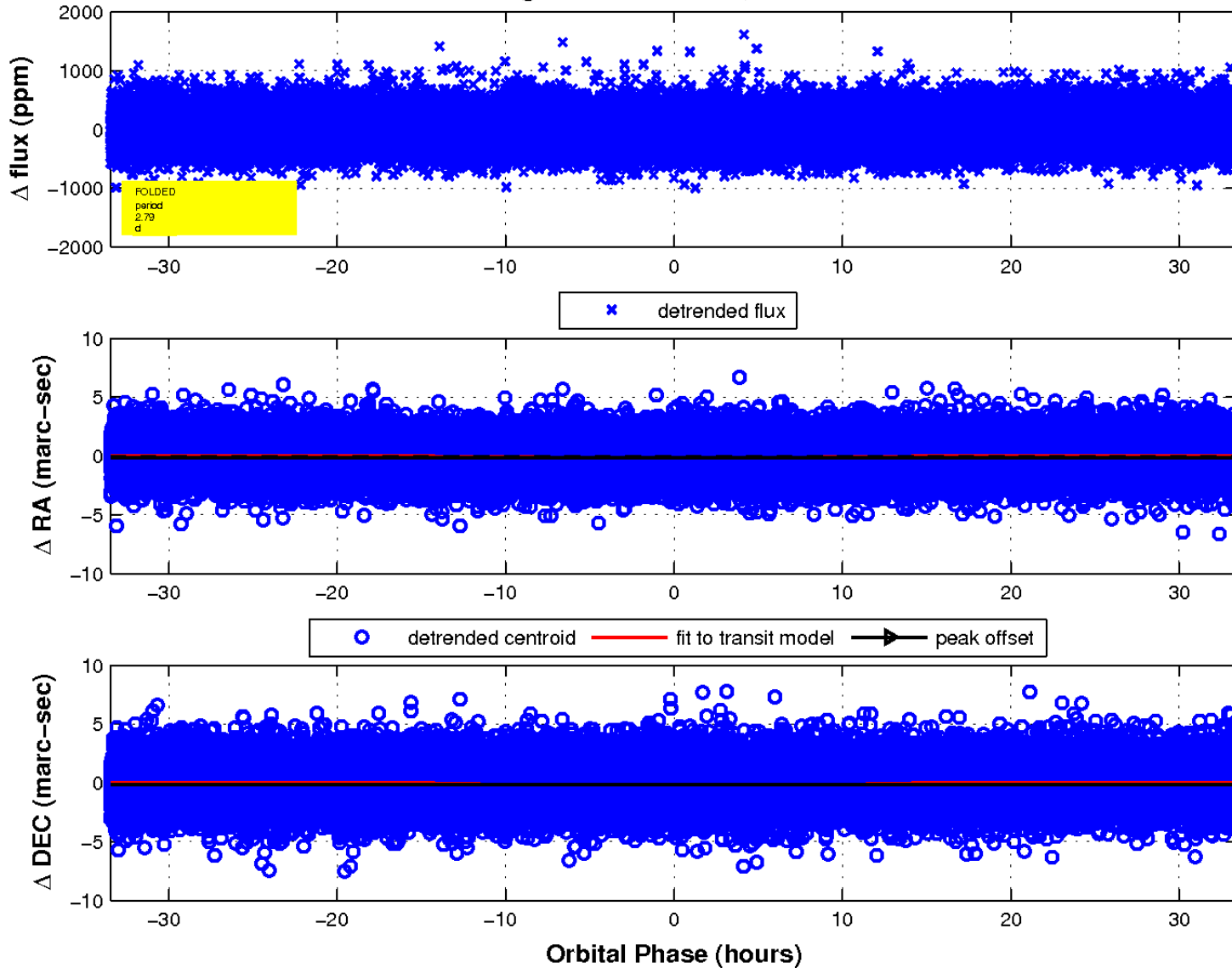
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

